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an in-line concentration detector for determining a polymer concentration in the high molecular weight fraction; and

a molar mass detector for determining the molar mass in the high molecular weight fraction;

wherein the system's total analysis time is not greater than about 5 minutes per sample.

Please cancel claims 2, 3, 30 and 37 without prejudice or disclaimer.

REMARKS

Claims 1, 4 to 29 and 31 to 36 are pending.

Claims 1 to 3, 9 to 29, 31 to 33, 36 and 37 were rejected under 35 U.S.C. §103(a) over Miroslav and Nielsen et al. and claims 4 to 8, 30, 34 and 35 were rejected under 35 U.S.C. §103(a) over Miroslav, Nielsen et al. and Fyvie et al.

First, the provisional application 60080652 and Petro 6,260,407 are not of record in this case. The Applicants are "entitled to a patent unless" "the invention was described in... a patent granted on an application... before the invention by the applicant(s)." See 35 U.S.C. §102 (e). "Unless," the PTO establishes that (1) through (13) are disclosed in the 60080652 provisional application and that (6) through (13) are disclosed in Petro 6,260,407, a parent to Miroslav relating back to the provisional, the Applicants are entitled to a patent.

Second, Miroslav, Nielsen and Fyvie et al. do not teach or suggest the "polymer reaction product of a diphenyl carbonate and a dihydric phenol" as recited in the amended claims.

(1) Fyvie et al. is not properly combinable with Miroslav and Nielsen. The Fyvie et al. disclosure that monochloroformate oligomer and phenyl chloroformate reaction products can be separated by GPC would not have led one skilled in the art to combination with Miroslav steps (6) through (13) and Nielsen steps (1) through (5). The steps (1) through (13) are not a simple GPC. Concluding that the Fyvie et al. disclosure is combinable with the (1) through (13) steps is an improper "conclusionary" statement unsupported by "objective teaching[s] of the prior art" and unsupported by the reasoned logic required by *In re Lee*, 61 USPQ 2d 1430, 1434, 277 F.3d 1338, _____ (Fed. Cir. 2002).

(2) Even if improperly combined, the references fail to teach or suggest the "polymer reaction product of a diphenyl carbonate and a dihydric phenol." The references do not establish a prima facie case of obviousness. "When the references cited by the examiner fail to establish a prima facie case of obviousness, the rejection is improper and will be overturned." *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

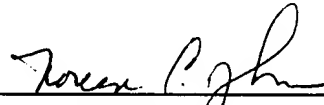
For these additional reasons, the rejections of claims 1 to 3, 9 to 29, 31 to 33, 36 and 37 under 35 U.S.C. § 103(a) over Miroslav and Nielsen et al. and claims 4 to 8, 30, 34 and 35 under 35 U.S.C. § 103(a) over Miroslav, Nielsen et al. and Fyvie et al. should be withdrawn.

The above amendments should place this application in condition for allowance. The amendments add no new issues. Thus, entry of the amendments is requested under 37 CFR § 1.116. In the alternative, if the application is not allowed, applicants respectfully request the PTO to withdraw the final rejection and properly make provisional application 60080652 and Petro 6,260,407 of record and reissue another office action addressing applicants' arguments.

In view of the foregoing amendments and remarks, reconsideration and allowance of claims 4 to 29 and 31 to 36 are respectfully requested.

Should the Examiner believe that any further action is necessary in order to place this application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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MARKED UP CLAIMS VERSION

1 (amended). A method for the determination of polymer molecular weight, comprising:

injecting a known volume of an analytical sample comprising a polymer reaction product of a diphenyl carbonate and a dihydric phenol into a flow analysis system comprising a chromatographic column, a concentration detector, and a molar mass detector;

effecting a minimally dispersive separation of the analytical sample with the chromatographic column to yield a high molecular weight fraction;

determining [the] a polymer concentration in the high molecular weight fraction using the concentration detector;

determining the molar mass in the high molecular weight fraction using the molar mass detector; and

deriving an average molecular weight from the polymer concentration and the molar mass;

wherein the total analysis time is not greater than about 5 minutes per sample.

5 (amended). The method of claim [4] 1, wherein the [aromatic polycarbonate is synthesized from at least one] dihydric phenol is selected from the group consisting of 2,2-bis-(4-hydroxyphenyl)propane; hydroquinone; resorcinol; 2,2-bis-(4-hydroxyphenyl)pentane; 2,4'-dihydroxydiphenylmethane; bis-(2-hydroxyphenyl)methane; bis-(4-hydroxyphenyl)methane; bis-(4-hydroxy-5-nitrophenyl)methane; 1,1-bis-(4-hydroxyphenyl)ethane; 3,3-bis-(4-hydroxyphenyl)pentane; 2,2'-dihydroxydiphenyl; 2,6-dihydroxynaphthylene; bis-(4-hydroxyphenyl)sulfone; 2,2'-dihydroxydiphenylsulfone; 4,4'-dihydroxydiphenylether; 4,4'-dihydroxy-2,5-diethoxydiphenylether; and 1,1-bis(3-methyl-4-hydroxyphenyl)cyclohexane.

6 (amended). The method of claim 4, wherein the analytical sample [comprising aromatic polycarbonate is prepared by dissolving an aromatic polycarbonate resin] comprises the polymer reaction product in a suitable solvent.

28 (amended). A method for the determination of polymer molecular weight, comprising:

providing a sample array comprising a plurality of spatially differentiated sites, each site comprising a polymer resin reaction product of a dipehnyl carbonate and a dihydric phenol;

preparing an analytical sample for each spatially differentiated site by dissolving the polymer resin reaction product in a suitable solvent;

injecting a known amount of each analytical sample into a flow analysis system comprising a chromatographic column, a concentration detector, and a molar mass detector;

effecting a minimally dispersive separation of each analytical sample with the chromatographic column to yield a high molecular weight fraction substantially free of monomers;

determining [the] a polymer concentration in the high molecular weight fraction of each analytical sample using the concentration detector;

determining the molar mass in the high molecular weight fraction of each analytical sample using the molar mass detector; and

deriving an average molecular weight for each analytical sample based on the polymer concentration and the molar mass;

wherein the total analysis time is not greater than about 5 minutes per sample.

31 (amended). A system for the determination of polymer average molecular weight, comprising:

a solvent delivery system;

an autoinjector for injecting a known volume of an analytical sample comprising a polymer reaction product of a diphenyl carbonate and a dihydric phenol;

a chromatographic column for effecting a minimally dispersive separation of the analytical sample to yield a high molecular weight fraction substantially free of monomers;

an in-line concentration detector for determining [the] a polymer concentration in the high molecular weight fraction; and

a molar mass detector for determining the molar mass in the high molecular weight fraction;

wherein the system's total analysis time is not greater than about 5 minutes per sample.